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THE WEATHER OF THE MONTH.

By Mr. P. C. DAY, Acting Chief, Climatological Division.

PRESSURE AND WINDS.

The distribution of mean atmospheric pressure for July, 1908, over the United States and Canada, is graphically shown on Chart VI, and the average values and departures from the normal are shown for each station in Tables I and III.

There was a marked rise in pressure from that of June, 1908, over all portions of the United States and Canada, except along the coast of California and Oregon and a small area over the lower Lake region. The increase over the Great Plains and Rocky Mountain districts was unusual for the season, ranging from 0.10 to 0.26 inch.

The average pressure for the month was above normal over all districts, except a small area in northern California. Over the central Rocky Mountain region the pressure averaged more than 0.1 inch above normal, while over nearly all the remaining districts of the United States and Canada there was a rather uniform positive departure of from .05 to .08 inch.

Southerly and southwesterly winds prevailed over most of the districts east of the Rocky Mountains and also generally over the southern Plateau, while along the immediate Pacific coast they were mostly from the northwest.

There was a marked absence of high winds, and the average hourly movement was below the normal over nearly all districts, except along the immediate Atlantic coast where there was an excess ranging from 10 to 40 per cent.

TEMPERATURE.

The mean temperature for the month was below the normal over the southern portion of the Gulf States and from the middle Mississippi Valley westward to the Rocky Mountains and southward to the Mexican border, except over a small portion of southern Texas. There was a small deficiency also along the immediate Pacific coast and at points in western Virginia.

Over the Atlantic coast districts and from New England westward over the Lake region to the Dakotas, and generally

over the Rocky Mountains, Plateau, and Pacific coast districts, the mean temperature was above the normal, being especially high over central and northern California, Oregon, and eastern Washington, and the surrounding portions of Idaho and Nevada, where the positive departures ranged from 3° to 5° per day.

Maximum temperatures ranged from 90° to 98° over most districts east of the Rocky Mountains, except in the upper Missouri Valley, where they reached 100° or slightly higher. In the interior valleys of California, over southern Arizona, and in the lower Rio Grande Valley, they ranged from 100° to 114°.

Minimum temperatures below 40° were recorded in northern New England, along the northern border from the upper Michigan Peninsula to northern Washington, and generally over the Rocky Mountain districts from New Mexico northward. Temperatures of 32° or slightly lower occurred at a few points along the Main Divide from central Colorado to the Canadian border.

PRECIPITATION.

The distribution of precipitation during July, 1908, is graphically shown on Chart IV by appropriate shading or by figures representing the actual amount of fall over districts, the topography of which is too varied to admit of approximately correct shading.

The monthly amounts of precipitation east of the Rocky Mountains ranged generally from 2 to 4 inches, with somewhat larger amounts over portions of the lower Missouri Valley, in northern Texas, and portions of Oklahoma and Arkansas, and generally over the Gulf and South Atlantic States, where the average ranged from 4 to 6 inches, with local falls of more than 10 inches in eastern Texas, the southern portions of Louisiana and Mississippi, northern Florida, and eastern North Carolina.

Comparatively heavy rains for the region, 2 to 5 inches, occurred over the greater part of Arizona and New Mexico and

the southern portions of Utah and Colorado. West of the Rocky Mountains the rainfall was generally less than 1 inch, and over the greater part of California no rain occurred during the month.

Precipitation was above the normal along the Atlantic coast from southern New England to North Carolina, over the Appalachian Mountain region from central Pennsylvania southward, and over the west Gulf States to eastern Texas. There was also an excess over the Panhandle of Texas, northern New Mexico, and from Arizona northwestward over the Plateau districts to eastern Oregon and Washington, as well as along a narrow strip from central Colorado northeastward thru central Nebraska to northeastern Iowa.

There was a general deficiency in precipitation over northern New England, the Lake region, Ohio, Mississippi, and upper Missouri valleys, along the entire Pacific coast, and over the east Gulf States.

The drought that had prevailed during the latter part of June over New England and the northern portion of the Middle Atlantic States, was generally broken during the latter half of July, but the need of more rain was again felt at the end of the month, over portions of the Lake region and Ohio Valley.

HUMIDITY AND SUNSHINE.

Average relative humidity above the normal for July was the rule over nearly all portions of the United States, the only exceptions being small areas along the Atlantic coast from Virginia to New England, over the lower Mississippi Valley, in North Dakota, and in portions of central California and western Oregon. Over the Great Plains, Rocky Mountain, and Plateau districts there was a uniform excess of from 5 to 15 per cent.

Much clear weather prevailed from New England westward over the Lake region and upper Mississippi and Missouri valleys, where the amounts ranged generally above 60 per cent of the possible.

Over the interior of California and generally over the northern Plateau district, the sunshine was the above the normal, ranging from 75 to 95 per cent of the possible. Sunshine was also above the average over the western portion of Missouri and Arkansas and the eastern portions of Kansas and Oklahoma.

Much cloudy weather prevailed over the South Atlantic and Gulf States, western Texas, and the southern portions of the Rocky Mountain and Plateau regions.

WEATHER IN ALASKA.

Seasonable temperatures appear to have prevailed, the extremes ranging from 37° and 83° in the southern coast districts, to 32° and 89° in the interior. Rainfall was comparatively heavy over the southern coast, diminishing northward. It ranged from about 5 inches at Calder, in the extreme south, to less than 1 inch at Fort Gibbon, in the central part of the Territory, and near the Arctic Circle. Much cloudy weather prevailed over the southern coast, but in the interior clouds and sunshine alternated at frequent intervals.

In Canada.—Director R. F. Stupart says:

The mean temperature of July was above normal thruout the greater portion of Canada. A normal or slightly subnormal value, however, was recorded in eastern Saskatchewan, the greater portion of Manitoba, and the Rainy River and Thunder Bay districts of Ontario.

The precipitation during July in Canada was very generally less than the average, and this was particularly the case in the Western Provinces, and especially in southern Saskatchewan, where the total amount was

but 26 per cent of the average. Marked deficiencies also occurred in New Ontario and northern New Brunswick. Some few localities in northern Manitoba, central Ontario, and southern Nova Scotia reported a slight excess, generally due to thunderstorms of a very local character.

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
		°	°	°	°
New England	12	71.0	+ 2.1	+ 5.0	+ 0.7
Middle Atlantic	16	75.8	+ 1.2	+ 2.2	+ 0.3
South Atlantic	10	79.1	+ 0.2	+ 8.2	+ 1.2
Florida Peninsula *	8	81.6	— 0.2	+ 7.5	+ 1.1
East Gulf	11	80.1	— 0.2	+ 8.6	+ 1.2
West Gulf	10	80.8	— 1.0	+ 12.7	+ 1.8
Ohio Valley and Tennessee	13	77.1	+ 0.3	+ 8.3	+ 1.2
Lower Lake	10	71.8	+ 0.3	+ 2.9	+ 0.4
Upper Lake	12	68.4	+ 0.6	+ 10.0	+ 1.4
North Dakota *	9	68.9	+ 0.6	+ 20.1	+ 2.9
Upper Mississippi Valley	15	74.5	— 0.9	+ 10.3	+ 1.5
Missouri Valley	12	74.2	— 1.5	+ 16.8	+ 2.4
Northern Slope	9	68.5	+ 0.4	+ 9.1	+ 1.3
Middle Slope	6	74.3	— 2.3	+ 14.8	+ 2.0
Southern Slope *	7	77.1	— 3.2	+ 8.8	+ 1.3
Southern Plateau *	12	79.2	— 0.2	— 1.0	— 0.1
Middle Plateau *	10	72.2	+ 0.9	— 2.1	— 0.3
Northern Plateau *	12	71.0	+ 2.6	+ 5.8	+ 0.8
North Pacific	7	62.4	+ 1.2	+ 0.3	0.0
Middle Pacific	8	68.6	+ 1.8	+ 0.4	+ 0.1
South Pacific	4	71.9	+ 2.0	+ 3.2	+ 0.5

* Regular Weather Bureau and selected cooperative stations.

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percent- age of normal.	Current month.	Accumulated since Jan. 1.
		Inches.		Inches.	Inches.
New England	12	2.89	81	— 0.7	— 3.0
Middle Atlantic	16	4.30	98	— 0.1	— 0.9
South Atlantic	10	6.68	110	+ 0.6	— 1.4
Florida Peninsula *	8	5.80	88	— 0.8	— 4.7
East Gulf	11	5.91	111	+ 0.6	+ 0.5
West Gulf	10	2.77	85	— 0.5	+ 1.2
Ohio Valley and Tennessee	13	3.53	88	— 0.5	— 0.8
Lower Lake	10	3.44	100	0.0	+ 1.1
Upper Lake	12	2.73	87	— 0.4	+ 0.4
North Dakota *	9	2.46	92	— 0.2	+ 0.6
Upper Mississippi Valley	15	2.88	78	— 0.8	+ 2.3
Missouri Valley	12	3.40	89	— 0.4	+ 2.9
Northern Slope	9	1.60	106	+ 0.1	+ 2.3
Middle Slope	6	2.61	87	— 0.4	+ 3.8
Southern Slope *	7	3.15	111	+ 0.3	+ 5.1
Southern Plateau *	12	1.81	138	+ 0.5	+ 0.5
Middle Plateau *	10	1.04	162	+ 0.4	— 0.3
Northern Plateau *	12	0.82	158	+ 0.3	— 1.1
North Pacific	7	0.37	55	— 0.3	— 2.9
Middle Pacific	8	0.00	00	0.0	— 3.9
South Pacific	4	0.00	00	0.0	— 1.3

* Regular Weather Bureau and selected cooperative stations.

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	4.8	— 0.1	Missouri Valley	4.2	+ 0.1
Middle Atlantic	5.3	+ 0.5	Northern Slope	3.1	— 0.7
South Atlantic	5.4	+ 0.4	Middle Slope	4.8	+ 0.8
Florida Peninsula	4.7	— 0.3	Southern Slope	5.2	+ 1.4
East Gulf	6.2	+ 1.2	Southern Plateau	4.4	+ 1.1
West Gulf	4.1	+ 0.4	Middle Plateau	3.7	+ 1.7
Ohio Valley and Tennessee	5.0	+ 0.4	Northern Plateau	2.8	— 1.7
Lower Lake	4.0	— 0.5	North Pacific	4.2	— 0.2
Upper Lake	4.7	0.0	Middle Pacific	3.5	+ 0.6
North Dakota	3.5	— 0.4	South Pacific	2.3	— 0.4
Upper Mississippi Valley	4.7	+ 0.6			

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	79	- 1	Missouri Valley	69	+ 3
Middle Atlantic	75	+ 1	Northern Slope	58	+ 6
South Atlantic	81	+ 1	Middle Slope	66	+ 6
Florida Peninsula	79	- 1	Southern Slope	70	+11
East Gulf	80	+ 2	Southern Plateau	48	+ 8
West Gulf	75	+ 1	Middle Plateau	40	+ 7
Ohio Valley and Tennessee	71	+ 2	Northern Plateau	44	+ 3
Lower Lake	70	+ 1	North Pacific	73	0
Upper Lake	73	+ 1	Middle Pacific	60	0
North Dakota	62	- 4	South Pacific	61	- 3
Upper Mississippi Valley	72	+ 4			

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Atlanta, Ga.	18	52	nw.	Lincoln, Nebr.	5	52	sw.
Buffalo, N. Y.	17	52	sw.	Minneapolis, Minn.	17	53	nw.
Columbus, Ohio.	26	53	e.	Mount Tamalpais, Cal. ..	31	52	nw.
El Paso, Tex.	3	68	nw.	Pierre, S. Dak.	5	55	nw.
Hatteras, N. C.	31	58	nw.	Pittsburg, Pa.	12	52	nw.
Havre, Mont.	25	52	sw.	Point Reyes Light, Cal. ..	1	61	nw.
Jacksonville, Fla.	18	54	sw.				